

# Wild Salmon Recovery



## Introduction

Western Washington tribes are leaders in the salmon recovery effort.

Over the past three decades, in response to dwindling populations and a commitment to sustainable fisheries, the tribes and State of Washington have worked together as co-managers of the resource, modifying and reducing harvests to protect individual populations of salmon. Harvest levels have been cut dramatically – by as much as 80-90 percent in some cases – at great cost to the spiritual, cultural and economic well-being of the tribes. Harvest reductions alone, however, cannot make up for the loss of wild salmon production caused by lost and degraded spawning and rearing habitat.

Tribal governments have made strides to protect salmon habitat, both on their reservations through land-use and water resource authorities and off-reservation by collaborating with non-Indian neighbors to protect and restore watersheds that support salmon. Extensive habitat protection and restoration throughout the region is beyond the power of the tribes alone to implement. Only through concerted federal, state, tribal, local and private efforts can this be achieved.

Habitat degradation began more than a century ago, but over the past 30 years a huge population influx around the Puget Sound—with its accompanying development, pollution, and increased demand for water—is decimating much of what remains of the region's once highly productive salmon habitat. The population of the region is expected to double in the next 20 years, creating the urgent need to take meaningful steps to protect and restore ecosystems that support salmon and other life.

In the spring of 1999, the National Marine Fisheries Service listed three western Washington salmon stocks – Puget Sound chinook, Hood Canal/Eastern Strait of Juan de Fuca summer chum, and Lake Ozette sockeye – as “threatened” under the Endangered Species Act (ESA). The listing was the first of a species that resides in a heavily urbanized area such

as Puget Sound, and placed massive ongoing responsibilities on the treaty tribes as co-managers of the salmon resource.

While the ESA is neither the starting point nor end point for salmon recovery, it is a primary consideration when contemplating actions potentially harmful to these listed species. Wild salmon are the key indicator species in the region, reflecting the overall health of the freshwater and nearshore marine ecosystems on which they depend, as well as the effectiveness of efforts to preserve, protect and enhance those ecosystems. Tribal salmon restoration efforts won't conclude until there are healthy wild fish populations to support harvest by both Indian and non-Indian fishermen.

The tribes know that cooperation is the key to wild salmon recovery, and are involved in myriad collaborative processes to reach that goal. Some of those processes include:

## A Shared Strategy

The Shared Strategy is the essence of cooperative conservation. It is a bottom-up collaborative approach to wild salmon recovery that links ongoing wild salmon recovery initiatives at the tribal, state, federal and local levels to create a plan that is viable and cost-effective. The Shared Strategy establishes, organizes and manages these links; identifies necessary long- and short-term actions and coordinates funding needs; and proposes laws or policies needed to support wild salmon recovery.

After nearly six years of collaborative efforts, a recovery plan for listed Puget Sound chinook that meets ESA requirements has been delivered to the National Marine Fisheries Service (NMFS), the federal agency charged with implementing the ESA. The endorsement and participation of NMFS in the Shared Strategy process has been critical to its success.

The recovery plan's strength rests on three factors:

- Needs of people and fish are addressed together.

- The plan is built on the foundation of 14 watershed planning areas across Puget Sound; it contains a tailored approach to recovery based on local characteristics and conditions.
- While the plan focuses on chinook, it is designed with the entire ecosystem in mind, as well as the environmental and biological processes that create healthy places for salmon.

## Hatchery Reform

Together, the more than 100 tribal, state and federal hatcheries in western Washington comprise the largest hatchery system in the world. They produce nearly three-fourths of all the salmon harvested in Puget Sound and are critical to meeting treaty tribal harvest obligations. Because of the need to protect weak wild salmon stocks, without hatcheries, there would be no salmon fishing at all in western Washington.

Congress in FY 00 adopted and funded the recommendations of a science advisory team to launch the Puget Sound and Coastal Washington Hatchery Reform Project, a systematic, science-driven examination of how hatcheries can help recover and conserve naturally spawning salmon populations and support sustainable fisheries.

Hatchery Reform means designing and operating hatchery programs in concert with the needs of wild salmon populations. Hatcheries are not a substitute for healthy spawning and rearing habitat, but rather an extension of that habitat – a productive tributary of the river on which a hatchery is situated. Together with ongoing habitat restoration efforts and strict harvest regulations, Hatchery Reform is a fundamental part of efforts to recover wild salmon and sustain fisheries in Washington.

The tribal, state and federal co-managers are now implementing more than 1,000 recommendations developed by an independent Hatchery Reform science panel as part of the Hatchery Reform Project to aid recovery of wild salmon through improved hatchery management practices.



A pair of coho salmon journey to the spawning grounds.

## Pacific Coastal Salmon Recovery Fund

The Pacific Coastal Salmon Recovery Fund (PCSRF) was established by Congress in FY 00 to aid the conservation, restoration and sustainability of Pacific salmon and their habitats. Congressional appropriations have been made to Pacific Coast and Columbia River Indian tribes, as well as the states of Oregon, Washington, Idaho and Alaska to aid recovery of weak wild salmon stocks and leverage additional funding and volunteer participation by local and private entities.

PCSRF funding supplements extremely limited tribal resources for salmon recovery efforts. To make each federal funding dollar work to its fullest, tribes leverage PCSRF funding through partnerships with other tribes, local governments, watershed councils, conservation organizations and others.

PCSRF monies are making significant contributions to the recovery of wild salmon throughout the region. Since the program's inception, Pacific coastal tribes, including the 20 treaty Indian tribes in western Washington, have used PCSRF monies to address habitat restoration needs on more than 131 miles of streams, remove more than 38 fish passage barriers that have opened up about 12 miles of additional

salmon habitat, acquired more than 188 acres of land to protect salmon habitat, conducted more than 55 limiting factors assessments in salmon-bearing watersheds, and monitored more than 3,383 miles of salmon habitat.

### **Salmon And Steelhead Habitat Inventory And Assessment Project (SSHIAP)**

Habitat is key to wild salmon recovery. The Salmon and Steelhead Habitat Inventory and Assessment Project (SSHIAP), a joint effort of the treaty tribes and State of Washington since 1995, is providing a blueprint for joint tribal/state action to define a cooperative process to implement habitat and restoration strategies by documenting and quantifying past and current habitat conditions; providing a consistent framework for data analysis; assessing the role of habitat loss and degradation on the condition of salmon and steelhead stocks; and assisting in the development of stock- or watershed-specific strategies for habitat protection and restoration.

In early 2005, SSHIAP produced the most comprehensive report to date on the status of salmon habitat in the region. “State of Our Watersheds” compiles decades of data collected by tribes, and state and federal agencies, painting a picture of watersheds across western Washington.

To track changes in salmon habitat, such as completed restoration projects, the Watersheds Report will be updated every year. While the report took years to compile and write, it represents decades worth of data collected by tribal staff across western Washington.

### **Timber/Fish/Wildlife Forests And Fish Report**

In the 1970s, forest management in the State of Washington was a battlefield. Timber harvesting activities on state and private forestlands placed Indian tribes and conservation groups at odds with the timber industry over impacts to fish, wildlife, water quality and other aspects of the ecosystem. State government was unable to resolve the impasse.

Each previous set of changes had touched off new legal battles. The timber industry claimed the proposed changes would spell disaster during a period of poor market conditions, while tribes and conservation groups argued the changes didn’t go far enough.

The treaty Indian tribes in western Washington had seen how cooperation with the State of Washington in the early 1980s had led to improved management of the salmon resource, and proposed a similar approach to address forest practices.

With the aid of a mediator, the tribes, timber industry, environmental organizations, state government and others sat down to see if they could “agree to agree.” The result was the historic Timber/Fish/Wildlife Agreement (TFW).

Listings of several western Washington salmon stocks under the Endangered Species Act (ESA), ongoing statewide water quality degradation, and concern over the continued economic viability of the timber industry brought TFW participants together again in November 1996 to develop joint solutions to those problems. The result was the Forests and Fish Report (FFR), an evolution of TFW that updated forest practices rules, obtained federal assurances for ESA considerations, and established research and monitoring programs. FFR was adopted by the Washington State Legislature in May 2000.

FFR is based on four goals:

- To provide compliance with the ESA for aquatic and riparian-dependent species on non-federal forest lands;
- To restore and maintain riparian habitat on non-federal forest lands to support a harvestable supply of fish;
- To meet the requirements of the federal Clean Water Act for water quality on non-federal forest lands; and
- To maintain the economic viability of the timber industry in the State of Washington.

The tribes continue to develop and implement a comprehensive work plan evaluating the forest management guidelines set forth in the FFR for adequacy in meeting tribal salmon recovery goals.

They have developed a comprehensive communication network and a coordinated tribal response to improve the application of FFR objectives in watersheds throughout the State of Washington. The tribes are working closely with federal agencies with respect to trust relationships and in providing techni-

cal support in response to ESA listings in the forested landscape.

Following is an example of one of the many types of wild salmon recovery efforts conducted annually by the treaty tribes in western Washington.

## SRSC Project Aids Habitat For Fish, People

The Skagit River System Cooperative's (SRSC) first major restoration project in Island County will create acres of habitat for endangered fish species and improve the quality of life for homeowners surrounding the project area.

"Through years of research, we have seen the important role estuaries play in recovering wild salmon," said Lorraine Loomis, fisheries manager for the Swinomish Tribe. "This project is one example of how we are following through on that research, doing what we need to do to bring back healthy salmon runs."

At Arrowhead Lagoon on the northern side of Camano Island, a blend of Puget Sound brine and fresh water from the Skagit and Stillaguamish rivers creates badly needed habitat for fish and shellfish. Included among the species the surrounding area sustains are the chinook salmon and bull trout, listed as "threatened" under the federal Endangered Species Act. SRSC, the natural resources arm of the Swinomish and Sauk-Suiattle tribes, is working with property owners on a plan to restore the lagoon's proper functions for fish.



Staff from the Skagit River System Cooperative haul in a beach seine at Arrowhead Lagoon as part of a study on pocket estuary habitat.

"This type of habitat is fundamental for fish. Chinook salmon particularly use the lagoon for feeding, rearing, and refuge," said Darla Boyer, a restoration ecologist with SRSC who serves as the project manager. "Right now, about 80 percent of Arrowhead Lagoon is unavailable for fish. We're going to fix that."

The project will be the culmination of years of work. The SRSC research team has been gathering information by sampling fish in and around Arrowhead Lagoon since 2001.

Findings from this research indicate that wild juvenile chinook use pocket estuaries

like Arrowhead Lagoon in migrating out to sea from the streams where they were born. This is a crucially important life stage for young salmon fry, and SRSC data shows that the growing fish prefer this type of habitat over nearby nearshore areas.

The tribes are working with property owners in the nearby Eagle Tree Estates complex, several of whom have already provided valuable information.

"We'll be working closely with homeowners throughout the process," said Boyer. "Our goal is to leave the area a better place to live for both fish and for human residents."